

IN THE CLAIMS

Please amend the claims as indicated below.

1. (Currently Amended) An aqueous dispersion, comprising:

(A) at least one swellable polymer and/or oligomer comprising at least one functional group that is at least one of an anionic functional group, a potentially anionic functional group, and/or a nonionic hydrophilic functional group;

(B) surface-modified, cationically stabilized, inorganic nanoparticles of at least one kind; and

(C) ~~from 1 to 10% by weight of~~ at least one amphiphile, based on the sum (A) + (B) + (C),

wherein the at least one swellable polymer and/or oligomer (A) comprises a copolymer prepared by two-stage or multistage controlled free-radical copolymerization in an aqueous or an organic medium;

wherein in a first stage, at least one olefinically unsaturated monomer (a) is copolymerized with at least one non-(a) olefinically unsaturated monomer of the general formula (I):



wherein R¹, R², R³, and R⁴ are each independently one of a hydrogen atom, an unsubstituted alkyl radical, an unsubstituted cycloalkyl radical, an unsubstituted alkylcycloalkyl radical, an unsubstituted cycloalkylalkyl radical, an unsubstituted aryl radical, an unsubstituted alkylaryl radical, an unsubstituted cycloalkylaryl radical, an unsubstituted arylalkyl radical, an unsubstituted arylcycloalkyl radical, a substituted alkyl radical, a substituted cycloalkyl radical, a substituted alkylcycloalkyl radical, a substituted cycloalkylalkyl radical, a substituted aryl radical, a substituted alkylaryl radical, a substituted cycloalkylaryl radical, a substituted arylalkyl radical, and a substituted arylcycloalkyl radical, with the proviso that at least two of R¹, R², R³, and R⁴

are at least one of an unsubstituted aryl radical, an unsubstituted arylalkyl radical, an unsubstituted arylcycloalkyl radical, a substituted aryl radical, a substituted arylalkyl radical, and a substituted arylcycloalkyl radical;

wherein in a second stage, at least one further monomer (a) is (co)polymerized in the presence of a copolymer formed in the first stage, following the addition of small amounts, or without the addition, of free-radical initiators; and

wherein the dispersion has a pH of from 2 to 7.

2. (Previously Presented) The aqueous dispersion of claim 1, wherein the aqueous dispersion has a solids content of up to 60% by weight, based on its total amount.

3. (Currently Amended) The aqueous dispersion of claim 1,
containingcomprising:, based on the sum (A) + (B) + (C),

—from 1 to 30% by weight (A);

—from 60 to 98% by weight (B); and

from 1 to 10% by weight (C);

wherein % by weight is based on the sum (A) + (B) + (C).

4. (Currently Amended) The aqueous dispersion of claim 1, wherein the at least one swellable polymer and/or oligomer (A) comprises contains anionic and/or potentially anionic functional groups and has, at a pH of from 2 to 7, an electrophoretic mobility ≤ -0.5 ($\mu\text{m/s}$)/(V/cm).

5. (Previously Presented) The aqueous dispersion of claim 4, wherein the at least one swellable polymer and/or oligomer (A) has, at a pH of from 2 to 7, an electrophoretic mobility ≤ -2.0 ($\mu\text{m/s}$)/(V/cm).

6. (Canceled)

7. (Currently amended) The aqueous dispersion of claim 61, wherein the copolymer is prepared by reacting in a first stage (1) at least one monomer (b) with the at least one monomer (a) comprises containing at least one anionic and/or potentially anionic functional group, to give a copolymer.

8. (Currently Amended) The aqueous dispersion of claim 61, wherein the copolymer is prepared by reacting in a first stage (1) at least one monomer (b) with at least one monomer (a) comprises containing at least one nonionic hydrophilic functional group, to give a copolymer.

9. (Currently Amended) The aqueous dispersion of claim 61, wherein the copolymer is prepared by reacting in at least one further stage the copolymer resulting in stage (1) with at least one further monomer (a) which contains comprises no anionic functional group, no potentially anionic functional group, and no nonionic hydrophilic functional group.

10. (Previously Presented) The aqueous dispersion of claim 1, wherein the potentially anionic functional group is selected from the group consisting of carboxylic acid groups, sulfonic acid groups, phosphonic acid groups, acidic sulfuric ester groups, and acidic phosphoric ester groups, and the anionic functional group is selected from the group consisting of carboxylate groups, sulfonate groups, phosphonate groups, sulfate ester groups, and phosphate ester groups.

11. (Previously Presented) The aqueous dispersion of claim 1, comprising the nonionic hydrophilic functional group, wherein the nonionic hydrophilic functional group is a polyethylene oxide group.

12. (Currently Amended) The aqueous dispersion of claim 61, wherein the at least one polymer comprises a copolymer prepared in an aqueous medium.

13. (Currently Amended) The aqueous dispersion of claim 12, wherein; the copolymer is prepared by (1) in a first stage copolymerizing (a)—

the controlled free-radical copolymerization is in the aqueous medium;

the at least one olefinically unsaturated monomer (a) comprises containing at least one functional group that is at least one of an anionic functional group, a potentially anionic functional group, and/or a nonionic hydrophilic functional group; and

and (b) at least one monomer different than the olefinically unsaturated monomer (a) in the aqueous medium and then (2) immediately thereafter the controlled free-radical copolymerization comprises in at least one further stage subjecting the at least one further monomer (a)-(a'), different than the monomer (a) of stage (1), to block copolymerization with the a copolymer formed in the first stage; (1),

wherein the aqueous medium used in the first stage (1) forms at least a majority of the an aqueous medium in which the copolymer is present in the aqueous dispersion.

14. (Previously Presented) The aqueous dispersion of claim 1, wherein the inorganic nanoparticles (B) are selected from the group consisting of main group and transition group metals and their compounds.

15. (Previously Presented) The aqueous dispersion of claim 14, wherein the main group and transition group metals are selected from the group consisting of metals of main group three, metals of main group four, metals of main group five, metals of transition group three, metals of transition group four, metals of transition group five, metals of transition group six, metals of group one, metals of group two, and the lanthanides.

16. (Original) The aqueous dispersion of claim 15, wherein the metals are selected from the group consisting of boron, aluminum, gallium, silicon, germanium, tin, arsenic, antimony, silver, zinc, titanium, zirconium, hafnium, vanadium, niobium, tantalum, molybdenum, tungsten, and cerium.

17. (Previously Presented) The aqueous dispersion of claim 14, wherein the compounds of the metals are oxides, oxide hydrates, sulfates, or phosphates.

18. (Previously Presented) The aqueous dispersion of claim 16, wherein the metals and their compounds are selected from the group consisting of silver, silicon dioxide, aluminum oxide, aluminum oxide hydrate, titanium dioxide, zirconium oxide, and cerium oxide.

19. (Currently Amended) The aqueous dispersion of claim 1, wherein the nanoparticles (B) are modified with at least one compound of the general formula II:



in which the indices and variables have the following meanings:

wherein S is a reactive functional group; L is an at least divalent organic linking group; H is a hydrolyzable monovalent group or a hydrolyzable atom; M is a divalent to hexavalent main group or transition group metal; R is a monovalent organic radical; o is an integer from 1 to 5; m+n+p is an integer from 2 to 6; p is an integer from 1 to 6; and m and n are zero or an integer from 1 to 5.

20. (Currently Amended) The aqueous dispersion of claim 19, wherein the-at least-one-polymer-and/or-oligomer-(A)-contains-nanoparticles-(B)-comprise-at least one reactive functional group S selected from the group consisting of (S1) reactive functional groups which contain at least one bond which can be activated with actinic radiation and (S2) reactive functional groups which undergo reactions with groups of their own kind and/or with complementary reactive functional groups.

21. (Original) The aqueous dispersion of claim 20, wherein M is aluminum or silicon.

22. (Currently Amended) The aqueous dispersion of claim 1, wherein the at least one amphiphiles (C) is are selected from the group consisting of monoalcohols and aliphatic polyols.

23. (Previously Presented) The aqueous dispersion of claim 22, wherein the monoalcohols are selected from the group consisting of monoalcohols having from 3 to 6 carbon atoms in the molecule and the aliphatic polyols are selected from the group consisting of diols having from 3 to 12 carbon atoms in the molecule.

24. (Previously Presented) A method comprising applying the aqueous dispersion of claim 1 to a substrate and forming one of a coating for a motor vehicle body or part, a coating for an interior and/or exterior of a building, a coating for a door, a coating for a window, a coating for furniture, an industrial coating, a coating for plastics parts, a coating for a coil, a coating for a container, a coating for an electrical component, a coating for white goods, or a coating for hollow glassware.

25. (Previously Presented) A method comprising applying the aqueous dispersion of claim 1 to a substrate as a molding or as a self-supporting film.

26. (Currently Amended) An aqueous dispersion, comprising:

(A) at least one swellable polymer and/or oligomer containing at least one functional group that is at least one of an anionic functional group, a potentially anionic functional group, and/or a nonionic hydrophilic functional group; prepared by a two-stage or multistage controlled free-radical copolymerization in an aqueous or an organic medium wherein (1) in a first stage (a) at least one olefinically unsaturated monomer (a) containing at least one anionic and/or potentially anionic functional group, and (b) at least one non-(a) olefinically unsaturated monomer of the general formula (I)



wherein R^1 , R^2 , R^3 , and R^4 are each independently one of a hydrogen atom, an unsubstituted alkyl radical, an unsubstituted cycloalkyl radical, an unsubstituted alkylecycloalkyl radical, an unsubstituted cycloalkylalkyl radical, an unsubstituted aryl

radical, an unsubstituted alkylaryl radical, an unsubstituted cycloalkylaryl radical, an unsubstituted arylalkyl radical, an unsubstituted arylecycloalkyl radical, a substituted alkyl radical, a substituted cycloalkyl radical, a substituted alkylecycloalkyl radical, a substituted cycloalkylalkyl radical, a substituted aryl radical, a substituted alkylaryl radical, a substituted cycloalkylaryl radical, a substituted arylalkyl radical, and a substituted arylecycloalkyl radical, with the proviso that at least two of R¹, R², R³, and R⁴ are at least one of an unsubstituted aryl radical, an unsubstituted arylalkyl radical, an unsubstituted arylecycloalkyl radical, a substituted aryl radical, a substituted arylalkyl radical, and a substituted arylecycloalkyl radical;

are-eopolymerized and then

(2) in a second stage at least one further monomer (a) is (co)polymerized in the presence of the copolymer formed in the first stage, following the addition of small amounts, or without the addition, of free-radical initiators.

(B) surface-modified, cationically stabilized, inorganic nanoparticles of at least one kind, wherein the nanoparticles are modified with at least one compound of the general formula II:



in which the indiees and variables have the following meanings:

wherein S is a reactive functional group; L is an at least divalent organic linking group; H is a hydrolyzable monovalent group or a hydrolyzable atom; M is a divalent to hexavalent main group or transition group metal; R is a monovalent organic radical; o is an integer from 1 to 5; m+n+p is an integer from 2 to 6; p is an integer from 1 to 6; and m and n are zero or an integer from 1 to 5; and

(C) at least one amphiphile;

wherein the at least one swellable polymer and/or oligomer (A) comprises a copolymer prepared by two-stage or multistage controlled free-radical copolymerization in an aqueous or an organic medium;

wherein in a first stage, at least one olefinically unsaturated monomer (a) is copolymerized with at least one non-(a) olefinically unsaturated monomer of the general formula (I);



wherein R¹, R², R³, and R⁴ are each independently one of a hydrogen atom, an unsubstituted alkyl radical, an unsubstituted cycloalkyl radical, an unsubstituted alkylcycloalkyl radical, an unsubstituted cycloalkylalkyl radical, an unsubstituted aryl radical, an unsubstituted alkylaryl radical, an unsubstituted cycloalkylaryl radical, an unsubstituted arylalkyl radical, an unsubstituted arylcycloalkyl radical, a substituted alkyl radical, a substituted cycloalkyl radical, a substituted alkylcycloalkyl radical, a substituted cycloalkylalkyl radical, a substituted aryl radical, a substituted alkylaryl radical, a substituted cycloalkylaryl radical, a substituted arylalkyl radical, and a substituted arylcycloalkyl radical, with the proviso that at least two of R¹, R², R³, and R⁴ are at least one of an unsubstituted aryl radical, an unsubstituted arylalkyl radical, an unsubstituted arylcycloalkyl radical, a substituted aryl radical, a substituted arylalkyl radical, and a substituted arylcycloalkyl radical;

wherein in a second stage, at least one further monomer (a) is (co)polymerized in the presence of a copolymer formed in the first stage, following the addition of small amounts, or without the addition, of free-radical initiators; and

wherein the dispersion has a pH of from 2 to 7.